



# PME294

- **EMI suppressor, class Y1, metallized paper**
- **Safety capacitor, ceramic replacement**
- **470 – 4700 pF, 440 VAC, +115 °C, test voltage 4000 VAC 60 s**

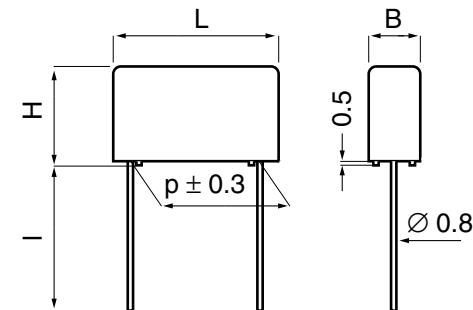
- Self-extinguishing encapsulation. The material is recognized according to UL 94 V-0.
- Very precise positioning of the leads in relation to the case giving efficient utilisation of PC board space.
- Excellent self-healing properties. Ensures long life even when subjected to frequent overvoltages.
- High dU/dt capability.
- Good resistance to ionisation due to impregnated dielectric.
- The capacitors meet the most stringent IEC humidity class, 56 days.
- The impregnated paper ensures excellent stability giving outstanding reliability properties, especially in applications having continuous operation.

## TYPICAL APPLICATIONS

Safety capacitor for bridging of double or reinforced insulation applications requiring voltage test up to 4000 VAC 60 seconds. PME294 can be left in place during this test.

## CONSTRUCTION

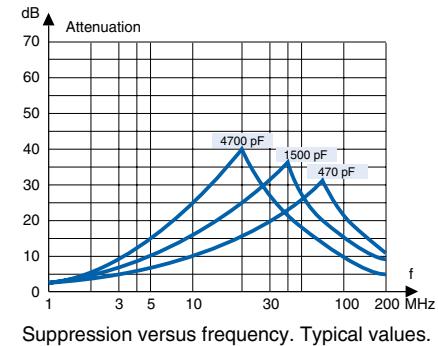
Multi-layer metallized paper. Encapsulated and impregnated in self-extinguishing material meeting the requirements of UL 94V-0.



## TECHNICAL DATA

Rated voltage	440 VAC 50/60 Hz
Capacitance range	470 – 4700 pF
Capacitance tolerance	± 20%
Temperature range	-40 to +115 °C
Climatic category IEC	40/115/56/B
Approvals	S, N, D, FI, VDE, SEV, IMQ, UL, CSA
Dissipation factor $\tan\delta$	$\leq 1.3\%$ at 1 kHz
Insulation resistance	$\geq 12000\text{ M}\Omega$ Measured at 500 VDC after 60 s, +23°C
Resonance frequency	Tabulated self-resonance frequencies $f_0$ refer to 5 mm lead length.
In DC applications	Recommended voltage: $\leq 1500\text{ VDC}$
Test voltage between terminals	The 100% screening factory test is carried out at 4000 VAC, 50 Hz, 2 s. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test.

I = standard : 30 +5/-0 mm  
option : short leads, tolerance +0/-1 mm  
(standard 6 mm, code R06)  
Other lead lengths on request



## ENVIRONMENTAL TEST DATA

Vibration	IEC 60068-2-6 Test Fc	3 directions at 2 hour each 10 – 500 Hz at 0.75 mm or 98 m/s <sup>2</sup>	No visible damage No open or short circuit
Bump	IEC 60068-2-29 Test Eb	4000 bumps at 390 m/s <sup>2</sup>	No visible damage No open or short circuit
Solderability	IEC 60068-2-20 Test Ta	Solder globule method	Wetting time < 1 s
Active flammability	EN 132400		
Passive flammability	IEC 60384-14 (1993) EN 132400		
Humidity	IEC 60068-2-3 Test Ca	+40°C and 90 – 95% R.H.	56 days

## ARTICLE TABLE

Capaci- tance pF	Max dimensions in mm B H L p				Quantity per package reel				Max dU/dt V/μs	Approvals						Article code	
	R30 pcs	R06 pcs	taped pcs	Weight g	f <sub>o</sub> MHz	S	N	D	F	VDE	SEV	IMQ	UL	CSA			
470	5.5	12.0	18.0	15.0	500	1000	600	1.7	64	2000	✓	✓	✓	✓	✓	✓	PME294RB3470MR30
560	5.5	12.0	18.0	15.0	500	1000	600	1.7	59	2000	✓	✓	✓	✓	✓	✓	PME294RB3560MR30
680	5.5	12.0	18.0	15.0	500	1000	600	1.7	54	2000	✓	✓	✓	✓	✓	✓	PME294RB3680MR30
820	5.5	12.5	18.0	15.0	500	1000	600	1.8	49	2000	✓	✓	✓	✓	✓	✓	PME294RB3820MR30
1000	5.5	12.5	18.0	15.0	500	1000	600	1.8	46	2000	✓	✓	✓	✓	✓	✓	PME294RB4100MR30
1200	5.5	14.0	18.0	15.0	500	1000	600	2.0	43	2000	✓	✓	✓	✓	✓	✓	PME294RB4120MR30
1500	5.5	14.5	18.0	15.0	500	800	600	2.1	40	2000	✓	✓	✓	✓	✓	✓	PME294RB4150MR30
1800	7.5	13.0	18.0	15.0	400	600	400	2.5	37	2000	✓	✓	✓	✓	✓	✓	PME294RB4180MR30
2200	7.5	13.0	18.0	15.0	400	600	400	2.5	33	2000	✓	✓	✓	✓	✓	✓	PME294RB4220MR30
2500	7.5	13.5	18.0	15.0	400	600	400	2.6	31	2000	✓	✓	✓	✓	✓	✓	PME294RB4250MR30
2700	7.5	15.5	18.0	15.0	400	600	400	3.0	30	2000	✓	✓	✓	✓	✓	✓	PME294RB4270MR30
3300	7.5	15.5	18.0	15.0	400	600	400	3.0	27	2000	✓	✓	✓	✓	✓	✓	PME294RB4330MR30
3900	8.5	17.0	18.0	15.0	250	400	400	3.6	24	2000	✓	✓	✓	✓	✓	✓	PME294RB4390MR30
4700	8.5	17.0	18.0	15.0	250	400	400	3.6	22	2000	✓	✓	✓	✓	✓	✓	PME294RB4470MR30

## APPROVALS/REFERENCE DOCUMENTS

## MARKING

Certification Body	Specification	Approval reference	• RIFA
S	EN 132400	9902042/01	• RIFA article code
N	EN 132400	P99100386	• Rated capacitance
D	EN 132400	DK99-00529	• Rated voltage
FI	EN 132400	205353	• Climatic category according to IEC 60068-1, appendix A
VDE	EN 132400	91852	• Passive flammability class
SEV	EN 132400	99.7.70114.01	• Approval marks
IMQ	EN 132400	V4715	• Manufacturing code (year, month)
UL	UL 1414 (U <sub>R</sub> = 250 VAC) Double protection	E73869	
CSA	C22.2. No 1	53108	
	C22.2. No. 8	53108	

## ORDERING INFORMATION

## PACKING

The article code for the standard part is given in the article table.  
For other options, see page 21.

Capacitors in standard design (lead length 30 mm) and with lead length 5 or 6 mm are packed bulk in a box with dimensions 245 x 145 x 80 mm. Quantity/package as per article table.

Reels with taped capacitors are packed 10 in a box with dimension 370 x 370 x 560 mm. The standard quantity/reel is for 360 mm reel. If 500 mm reel is required, it must be specified when ordering and the quantity is 2 x the given quantity.